

Remarks

The Office Action dated April 5, 2006, and made final, and Advisory Action dated June 6, 2006, have been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Subsequent to entry of this amendment, Claims 1-20 are pending in this application. Claims 1-20 stand rejected.

The rejection of Claims 1-5 and 7-15 under 35 U.S.C. § 103(a) as being unpatentable over Johnson (US 6,332,011) in view of Paillaman et al. (US 6,865,243) is respectfully traversed.

Applicants note that Claims 16 and 18-20 were not listed as being rejected under 35 U.S.C. § 103(a) as being unpatentable over Johnson in view of Paillaman et al. However, Claims 16 and 18-20 were described in the body of the rejection at pages 4-5 of the Office Action. Applicants response below treats Claims 16 and 18-20 as being rejected under Section 103(a).

Johnson describes a method of scanning a weld in a nuclear reactor vessel using a phased array probe positioned on top of a shroud head flange. The probe contains a linear array transducer having a plurality of elements configured to emit an ultrasonic beam. Notably, Johnson does not describe nor suggest mounting at least one ultrasonic phased array probe within a probe housing containing a liquid therein where the ultrasonic phased array probe is rotatable within the probe housing.

Paillaman et al. describe a method of inspecting a jet pump beam using at least one phased array probe positioned on the bottom of the jet pump beam. Paillaman et al. do not describe nor suggest mounting at least one ultrasonic phased array probe within a probe housing.

Independent Claim 1 of the present application recites a method of inspecting a portion of a weld that includes "rotatably mounting at least one ultrasonic phased array probe within a probe housing containing a liquid therein, each ultrasonic phased array probe comprising at least one transducer having a plurality of elements, the at least one ultrasonic phased array probe rotatable within the probe housing; attaching the probe housing adjacent an outer surface of the portion of the weld such that the liquid is adjacent the outer surface of the portion of the weld; and scanning the weld with the at least one ultrasonic phased array probe".

Johnson and Paillaman et al., alone or in combination, do not describe nor suggest a method as recited in Claim 1. Particularly, Johnson and Paillaman et al., alone or in combination, do not describe nor suggest rotatably mounting at least one ultrasonic phased array probe within a probe housing containing a liquid. Also, Johnson and Paillaman et al., alone or in combination, do not describe nor suggest that the ultrasonic phased array probe is rotatable within the probe housing. The Office Action admits, at page 3, that "Johnson does not specifically disclose or suggest an ultrasonic phased array probe within a probe housing".

Applicants submit that because Johnson does not describe nor suggest an ultrasonic phased array probe within a probe housing, Johnson does not describe nor suggest that the ultrasonic phased array probe is rotatable within the probe housing. Further, Paillaman et al. do not describe nor suggest mounting at least one ultrasonic phased array probe within a probe housing containing a liquid, and do not describe nor suggest that the ultrasonic phased array probe is rotatable within the probe housing. The Office Action, at page 3, notes that Paillaman et al. discloses a phased array probe that is formed from an array of transducer elements in a single housing. Applicants submit that this is a description of an ultrasonic phased array probe and not a description of an ultrasonic phased array probe mounted in a probe housing. Further, Paillaman et al. do not

describe nor suggest that the ultrasonic phased array probe is rotatable within the probe housing. Accordingly, Applicants submit that Claim 1 is patentable over Johnson and Paillaman et al., alone or in combination.

Claims 2-5 and 7-10 depend from independent Claim 1. When the recitations of dependent Claims 2-5 and 7-10 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 2-5 and 7-10 likewise are patentable over Johnson and Paillaman et al., alone or in combination.

Independent Claim 11 of the present application recites an apparatus that includes "a probe housing containing liquid; and at least one ultrasonic phased array probe rotatably mounted within said probe housing so that said at least one ultrasonic phased array probe is located partially within said probe housing liquid, said at least one ultrasonic phased array probe rotatable within said probe housing".

Johnson and Paillaman et al., alone or in combination, do not describe nor suggest an apparatus as recited in Claim 11. Particularly, and at least for the reasons set forth above, Johnson and Paillaman et al., alone or in combination, do not describe nor suggest at least one ultrasonic phased array probe rotatably mounted within a probe housing containing a liquid nor that the ultrasonic phased array probe is rotatable within the probe housing. Accordingly, Applicants submit that Claim 11 is patentable over Johnson and Paillaman et al., alone or in combination.

Claims 12-14 depend from independent Claim 11. When the recitations of dependent Claims 12-14 are considered in combination with the recitations of Claim 11, Applicants respectfully submit that Claims 12-14 likewise are patentable over Johnson and Paillaman et al., alone or in combination.

Independent Claim 15 recites a method that includes "rotatably mounting at least one ultrasonic phased array probe within a probe housing partially containing a liquid therein, wherein the at least one ultrasonic phased array probe includes at least one transducer having a plurality of elements, and the probe housing is configured to position the at least one ultrasonic phased array probe at a predetermined location on the weld, the at least one ultrasonic phased array probe rotatable within the probe housing; attaching the probe housing adjacent an outer surface of the at least two pipes such that the portion of the weld to be inspected is positioned therein and the liquid is adjacent the outer surface of the weld; and scanning the portion of the weld with the at least one ultrasonic phased array probe, wherein the probe emits a steerable ultrasonic beam".

Johnson and Paillaman et al., alone or in combination, do not describe nor suggest an apparatus as recited in Claim 15. Particularly, and at least for the reasons set forth above, Johnson and Paillaman et al., alone or in combination, do not describe nor suggest mounting at least one ultrasonic phased array probe within a probe housing containing a liquid, nor that the ultrasonic phased array probe is rotatable within the probe housing. Accordingly, Applicants submit that Claim 15 is patentable over Johnson and Paillaman et al., alone or in combination.

Claims 16 and 18-20 depend from independent Claim 11. When the recitations of dependent Claims 16 and 18-20 are considered in combination with the recitations of Claim 11, Applicants respectfully submit that Claims 16 and 18-20 likewise are patentable over Johnson and Paillaman et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 1-5, 7-16, and 18-20 be withdrawn.

The rejection of Claims 6 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Johnson (US 6,332,011) in view of Watts et al. (US 3,202,218) is respectfully traversed.

At least for the reasons set forth above, Johnson does not describe nor suggest a method as recited in independent Claim 1 or a method as recited in independent Claim 15. Particularly, Johnson does not describe nor suggest rotatably mounting at least one ultrasonic phased array probe within a probe housing containing a liquid. The Office Action admits, at page 3, that "Johnson does not specifically disclose or suggest an ultrasonic phased array probe within a probe housing".

Watts et al. is cited for teaching a sealing ring positioned between two clamping rings. Watts et al. is not cited for, and does not teach, a method that includes rotatably mounting at least one ultrasonic phased array probe within a probe housing containing a liquid. Therefore, Johnson and Watts et al., alone or in combination do not describe nor suggest a method that includes mounting at least one ultrasonic phased array probe within a probe housing containing a liquid. Accordingly, Applicants submit that independent Claims 1 and 15 are patentable over Johnson and Watts et al., alone or in combination.

Claim 6 depends from independent Claim 1 and Claim 17 depends from independent Claim 15. When the recitations of dependent Claims 6 and 17 are considered in combination with the recitations of Claims 1 and 15 respectively, Applicants respectfully submit that Claims 6 and 17 likewise are patentable over Johnson and Watts et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 6 and 17 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



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